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AUTHOR Wu, Shi-Chang
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ABSTRACT

This paper explores the practical implications of the distributional perspective on dropping out of school--a perspective that says that the concentration of student exodus from certain schools may reflect the impact of contextual or organizational factors as opposed to those that operate simply at the individual level. Based on data from the National Educational Longitudinal Study of 1988 and two follow-up surveys, it can be said that schools where learning was considered definitely a high priority, where academic achievement was emphasized, and where students were encouraged to enroll in academic classes were clearly related to a lower school dropout rate. Data reveal that the opposite educational environment existed in schools where the dropout rate was high. Thus, the size of a particular school's dropout rate appeared to be indicative of the quality of the school's academic program and operation. Additionally, empirical evidence points to a correlation between high dropout rates and students exposure to demoralized students, teachers with negative attitudes toward students, teachers considering students difficult to motivate, and the overall quality of the school's operating environment and classroom activities. An appendix provides one table and 10 technical notes. (GLR)

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EDUCATION AND LEARNING IN SCHOOLS WITH HIGH DROPOUT RATES

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By

Shi-Chang Wu

National Center for Education Statistics

I. Concentration of Dropouts: Two issues

Research on school dropouts often focuses on the individual student. Common targets of research interest are : who drops out and when; characteristics of the dropout; the risks of dropping out for various subgroups of students; risk factors correlated with dropping out; attributes of programs and interventions that reduce risks of attrition; strategies and priorities in dropout prevention for students considered at risk; programs and educational re-entry for those who have dropped out. In all aspects, the analytic interest is to identify, detect, understand, and help manage risks of attrition as an individual problem.

However, another perspective on dropping out of school is the distributional point of view, which says that the concentration of student exodus from certain schools may reflect the impact of contextual or organzational factors as opposed to those that

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operate simply at individual level. School climatic and operational conditions are thought to be integral parts of students' educational environments. The purpose of this paper is to explore the practical implications of the distributional perspective.

When dropouts are concentrated in some schools, two questions are important for research: Do schools with a high proportion of dropouts function and operate differently from those with lower proportions of dropouts? Do students attending schools with different levels of dropout rates exhibit different learning behaviors and educational activities? At the heart of these two questions is the concern that the quality of education provided by schools may be associated with the clustering of dropouts and potential dropouts.

The lack of research inquiries on distributional implications of school dropout rates presents a large gap in our understanding of the full range of educational problems associated with school dropout.[1] This paper presents findings that may help fill that gap.

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[1]A recent study that investigated the distributional aspects of high school dropout rates could be found in Fitspatrick and Yoels (1992). The focus of that study, however, was statewide rates and not school rates. Also, the primary purpose of that study was to explain differences in dropout rates rather than to explore distributional implications.

II. Data Source and Analyses

In order to explore whether the problem of dropping out of school means more than just the direct detrimental effects on the dropouts themselves and the subsequent societal costs and long term problems (such as unemployment, welfare dependency, criminal involvement, etc.), we have conducted inquiries in two areas. First, we examined the potential contextual linkages between school overall climatic and operational variables and school dropout rates. The focus of the inquiry in this area is to assess whether the concentration of dropouts exiting from schools signals certain school organzational problems or deficient conditions that the students must endure.

Second, the dropout rate of a school was analyzed for the possibility of creating a social effect that might be attributable to the contaminating influence of the dropouts, either by their serving, intentionally or unintentionally, as recruitors of potential dropouts, or by generating an indirect effect that depressed the vigor of learning activities among the remaining students.

Both of these two areas of analyses were conducted with data collected by National Educational Longitudinal Study of 1988

(NELS:88) sponsored by National Center for Education Statistics. The NELS:88 base year (1988) survey was a national representative sample of the eighth-grade students. Important contextual data were also collected from other sources, including schools, teachers, and parents. Two follow-up surveys were implemented in 1990 and 1992. This research was based on the data of the first follow-up survey. Data on school dropout rate and school organizational characteristics were obtained from the survey of administrators of schools attended by the tenth-grade students who participated in the base year survey. The tenth-graders' school principals were asked about their school dropout rate (F1C32). To help illuminate the empirical relationships between these school dropout rates and various school operational characteristics, we classified schools into five dropout rate categories: 0%, 1-4%, 5-9%, 10-19%, and 20% or more (F1C32R). We then analyzed school functional and operational variables according to these categories.

Personal educational data about individual students were collected by the first follow-up student survey. The analyses reported here used only the longitudinal sample of students, i.e., those who participated both the base year and the first follow-up surveys. Because of time limitation, we will discuss only the results of the first area of analyses.

III. Assessing School Organizational Conditions Correlated with School Dropout Rates

The first group of analyses were based on examining the empirical associations between school dropout rates and school climatic and operational variables. In theory, if school climate and operation are correlated empirically with school dropout rates such correlations should be taken as the critical indications that school operational difficulties coexist with the problem of school dropouts. The size of the observed correlations should, hence, reflect the extent to which deficient organizational conditions represent contextual conditions for individual students who remain in school.

Are school dropout rates in any way related to school organizational climate and operation? The major findings (which have been adjusted for the design effect) are reported in Table 1.

The first evidence reported shows that whether a tenth grader's school was a place where learning was considered definitely a high priority (F1C93B, based on the assessment of the school principal), was clearly related to the school dropout rate. For students who attended schools with 0% dropout rate, 50 percent could be characterized as being educated in schools where

learning was definitely a high priority (HPL). In comparison, only 27 percent of the tenth-graders enrolled at schools with 1 to 4% dropout rate could be considered HPL schools. For students who enrolled in schools with dropout rates in the ranges of 5-9, 10-19, 20% or more, their exposures to the HPL school environments were estimated to be down to only between 9 to 11 percent.

Whether a tenth-grader's school was one where students in general were definitely pressed by teachers to achieve academically (PAA in short, and based on F1C93D), is shown to be also related to the school dropout rate. About 61 percent of the students who enrolled in schools with a 0% dropout rate could be considered in the PAA schools, as compared to only 32 for those who enrolled in schools with dropout between 1 to 4 percent. And among the students who enrolled at schools with dropout rates in the ranges of 5-9, 10-19, and 20% or more, their exposures to PAA school environments were estimated to be between 16 to 19 percent.

Based on still another indicator, whether a tenth-grader's school was a place where students were definitely encouraged to enroll in academic classes (EEAC in short and based on F1C95J), was also related to the school dropout rate. Sixty-six percent of the students attending schools with a 0% dropout rate were exposed to the EEAC environment, whereas among those attending schools with dropout rates between 1-4, 5-9, 10-19, and 20% or more, only 54, 46, 39, and 28 percent, respectively, were exposed to the similar

EEAL environments.

If a tenth-grader went to a high school with a relatively high dropout rate, it also meant that this student was empirically less likely to be educated in an environment where students were expected to do their homework--EDH in short (F1C93E). Eighty percent of the students who enrolled in schools with a 0% dropout rate were in the EDH environment, as compared to 46, 35, 28, and 19 percent among those who enrolled in schools with dropout rates at 1-4, 5-9, 10-19 and 20% or more, respectively.

Thus, the size of the school dropout rate appears to be indicative of the quality of a school's overall academic program and operation. This is important, because it suggests that school dropout rates reflect the departure of the school from establishing itself as a quality place for learning.

But that is not all. Besides the indications of deficiencies in the academic learning environment, school dropout rate, in a more general social and organzational context, reflects also climatic problems in the school. Enrollment of a tenth-grade student in a high dropout rate school was empirically correlated with chances of exposure to problems such as demoralized student body and faculty, teachers with negative attitudes toward students, and teachers considering students difficult to motivate.

High morale among students and among teachers is commonly considered as an indicator of a well-managed school. Creating and maintaining high morale is a difficult but widely recognized objective in the management of schools and other organizations alike. The national data collected by NELS:88 show that a tenth-grader's opportunity to study in the environment of high student and teacher morale was correlated, negatively, with the school dropout rate.

Evidence reported in Table 1 indicates that 30 percent of the tenth-graders who enrolled in schools with a 0% dropout rate were in high student morale (HSM) category, as compared to between 17 and 19 percent in the same category for those who enrolled in schools with dropout rates between 1-4 and 5-9 percent. The likelihood of exposure to high teacher morale (HTM) shows a similar pattern. Twenty-eight percent of the ten-graders in schools with a 0% dropout rate were exposed to HTM, as compared to between 16 to 19 percent for those who enrolled in schools with dropout rates in the ranges of 1-4, 5-9, 10-19 percent. For those who enrolled in schools with dropout rates reaching 20 percent or higher, only six percent were exposed to HTM. HSM and HTM were both based on the assessment of school principals that HSM and HTM described very accurately about their schools (F1C93G and F1C93F).

Empirical evidence could also be provided concerning the association of high dropout rate with student exposure to teachers

with negative attitudes toward students, (TNEG in short, F1C93K) and with exposure to teachers who found students difficult to motivate (abbreviated as DFMO, F1C93L). Table 1 indicates that among the tenth-graders enrolling in the schools with a zero-percent dropout rate, 67 percent were NOT subject to TNEG. This rate was, again, based on the assessment of the principal that the statment of "teachers have a negative attitude about students" was not at all an accurate characterization of the school. The TNEG non-exposure rates were 43, 34, 27, and 19 percent, respectively, among students who enrolled in schools with dropout rates in the ranges of 1-4, 5-9, 10-19, and 20 percent or higher.

DFMO was also measured here as a non-exposure rate, based on the denial of the school principals that the teachers found it difficult to motivate the students. The DFMO non-expsoure rate for the tenth-graders attending schools with a zero-percent dropout rate was estimated nationally at 32 percent. Among the students attending schools with dropout rates in the range of 1-4 percent, the rate was at 14 percent, and among those who enrolled in schools with dropout rates in the ranges of 5-9, 10-19, or 20 percent or higher, the DFMO non-exposure rates were down to only between 3 to 7 percent.

Again, the empirical evidence indicates that the concentration of dropouts as reflected by the school dropout rate was linked to the declining quality of the school's operating environment.

Incidently, the very low DFMO non-exposure rates as observed here underscore the seriousness of motivational problems in the American schools in general.

Two more pieces of empirical evidence are introduced here, concerning the school organizational environment. One important quality of the school is that the classroom activities are purposively conceived, well-planned, well-organized, and well-executed. In other words, classroom activities are highly structured (CAHS). The NELS:88 data show that attending a school with a high proportion of dropouts was associated with diminishing opportunity for a ten-grade student to be exposed to CAHS learning environment, and attending a school with a low dropout rate enhanced such opportunity (F1C93C). Among the ten-graders who enrolled in schools with a zero-percent dropout rate, the exposure rate to CAHS was 37 percent, as compared to 22 percent among those who enrolled in schools with dropout rates in the range of 1-4 percent. That exposure rate was between 10 to 14 percent for those who enrolled in schools with dropout rates in the ranges of 5-9, 10-19, or 20 percent or higher.

The last piece of evidence to be introduced is about exposure to poor or fair (i.e., not-so-good) teachers (TNSG). The NELS:88 data show that the average TNSG rate as reported by the principals for students who enrolled in schools with a zero-percent dropout

rate was 16 percent. That rate went upward to 18, 21, 24 and 27 percent among students who enrolled in schools with dropout rates in the ranges of 1-4, 5-9, 10-19, and 20 percent or higher, respectively.

In summary, we have introduced a substantial amount of empirical evidence that shows school organizational correlates with school dropout rates, analyzed from the perspective of individual students.

Certainly, questions could be raised regarding the latent causal processes involved in each of the instances discussed above. For example, was it the high dropout rate that caused the defection, or avoidance, of good and excellent teachers, resulting in somewhat higher proportion of poor or not-so-good teachers in such schools? Or was it high TNSG that caused some students to stay out of school, resulting in a high dropout rate in the school? These are interesting questions that we have not explored. But these causation questions concern processes at the school level and are probably better analyzed with representative school level data when they become available.

The importance of the findings reported here is, however, not dependent on the kinds of causations stated above. The fact that they are associational (rather than causal) evidence hardly diminishes the practical significance which needs to be recognized:

The concentration of dropouts is often associated with deficient school conditions which are imposed on the remaining students.

Reference:

Ingels, S., L.A. Scott, J.T. Lindmark, M.R. Frenkel, and S.L. Myers

1992 National Educational Longitudinal Study: First Follow-Up Student Component Data File User's Manual (U.S.Dept. of Education: NCES)

1992 National Educational Longitudinal Study: First Follow-Up School Component Data File User's Manual (U.S. Dept. of Education: NCES)

Fitspatrick, K.M., and W.C. Yoels

1992 Policy, School Structure, and Sociodemographic Effects on Statewide High School Dropout Rates. In Sociology of Education, Vol. 6 (pp. 76-93).

APPENDIX A: Technical Note

Twelve variables were used in the analyses reported in this presentation that explored the empirical implications for individual students based on correlations between school dropout rates and school organzational conditions. The dropout rate of the school attended by a tenth-grade student was measured by F1C32R, which was a recoded variables using F1C32 as reported by the principal. F1C32R assumed five values: 0=0%, 1=1 to 4%, 2=4 to 9%, 3=10 to 19%, 4=20% or higher. All analyses were weighted by F1PNLWT and adjusted for the design effect as suggested in the data user's manuals.

The ten indicators of school organizational conditions used in the assessment of the risks of student exposure were:

1. The school was organized as a high-priority-in-learning environment (HPL): HPL was measured by CLMLRNG, based on the report of the school principal by recoding F1C93B (5=1; 1,2,3,4=0). The value of 1 indicated HPL environment (i.e., HPL described the school very accurately), and 0 indicated otherwise.

2. The school operated in such a way that students were pressed to achieve academically (PAA): PAA was measured by CLMACHV by recoding F1C93D with 5=1, and 1,2,3,4=0. The value of 1 in CLMACHV indicated that the school was a PAA environment, 0 otherwise.

3. The school was programmed to encourage students to enroll in academic classes (EEAC): EEAC was measured by CLMACCL by recoding F1C93J with 5=1 and 1,2,3,4=0. CLMEEAC=1 if the school was an EEAL environment, 0 if otherwise.

4. The school was an environment where students were expected to do their homework (EDH): The indicator of EDH was CLMHMWK, which was derived from recoding F1C93E with 5=1 and 1,2,3,4=0. CLMHMWK was 1 when the school was EDH, and 0 if otherwise.

5. The school had high student morale (HSM): HSM was measured by CLMSMOR by recoding F1C93G with 5=1 and 1,2,3,4=0. CLMSMOR was 1 if the school was HSM, 0therwise.

6. The school had high morale among teachers (HTM): HTM was measured by CLMTMOR by recoding F1C93F with 5=1 and 1,2,3,4=0. The value of 1 in CLMTMOR indicated a HTM school, and 0 otherwise.

7. The school was characterized as a place where teachers having negative attitudes about students (TNEG): The indicator of TNEG was CLMTNEG which measured the absence, rather than the presence, of TNEG. CLMTNEG was obtained by recoding F1C93K with 1=1 and 2,3,4,5=0. The value of 1 in CLMTNEG indicated that the school was not a TNEG environment; the value of 0 indicated that it was.

8. The school was characterized as a place where teachers found it difficult to motivate students (DFMO): The indicator of DFMO was CLMDFMO which measured the absence of DFMO condition, not the presence of it. It was based on the recoding of F1C93L with 1=1 and 2,3,4,5=0. The value of 1 indicated that the school was not a DFMO environment and 0 indicated it was.

9. The school's classroom activities were characterized as highly structured (CAHS): CAHS was measured by CLMSTRC, which was recoded from F1C93C, with 5=1 and 1,2,3,4=0. The value of 1 indicated that the school was CAHS, and the value of 0 indicate that it was not.

10. The school was staffed by a high proportion of poor or no-so-good teachers (TNSG): TNSG was measured by TCHRNSG, which was the combined total of percent of poor teachers (F1C92A) and percent of teachers rated as fair by the principal (F1C92B).

Table 1. Association Between the Dropout Rate of a Tenth-Grader's School and the Exposure to Various School Organizational Conditions

School Organizational Characteristic:	School Dropout Rate (%)					Correlation
	0	1-4	5-9	10-19	20+	(r)*
HPL (or CLMLRNG):						
Students place a high priority on learning: 1 = very accurate, 0 = Not	50.5	27.0	10.9	9.3	8.9	-.283
F1C93B (1,2,3,4 = 0; 5 = 1)						
PAA (or CLMACHV):						
Teachers at this school press students to achieve academically: 1=very accurate; 0 = Not	61.0	32.5	18.7	19.3	16.4	-.247
F1C93D (1,2,3,4 = 0; 5 = 1)						
EEAC (or CLMACCL):						
Counselors and teacher encourage students to enroll in academic classes: 1 = very accurate, 0 = Not	66.0	53.7	45.8	38.7	27.8	-.200
F1C93J (1,2,3,4 = 0; 5 = 1)						
EDH (or CLMHMWK)						
Students are expected to do homework: 1 = very accurate; 0 = Not	79.8	46.6	35.1	28.5	10.3	-.299
F1C93E (1 through 4 = 0; 5 = 1)						
HSM (or CLMSMOR)						
Student morale is high: 1 = very accurate; 0 = Not	30.3	18.9	16.6	10.3	9.6	-.143
F1C93G (1,2,3,4 = 0; 5 = 1)						

Table 1. Association Between the Dropout Rate of a Tenth-Grader's School and the Exposure to Various School Organizational Conditions (continued)

School Organizational Characteristic:	School Dropout Rate (%)					Correlation
	0	1-4	5-9	10-19	20+	(r)*
HTM (or CLMTMOR)						
Teacher morale is high: 1 = very accurate; 0 = Not	28.0	18.6	18.3	16.2	6.6	-.110
F1C93F (1,2,3,4 = 0; 5 = 1)						
TNEG (or CLMTNEG)						
Teachers have a negative attitudes about students: 1 = Not accurate at all; 0 = Some what or very accurate	67.1	43.1	33.7	27.2	19.2	.246
FLC93K (1 = 1,2,3,4,5 = 0)						
DFMO (or CLMDFMO)						
Teachers find it difficult to motivate students: 1 = Not accurate at all; somewhat or very accurate	32.5	14.6	7.1	7.0	3.4	.211
F1C93L (1 = 1; 2,3,4, 5 = 0)						
CAHS (or CLMSTRC)						
Classroom activities are highly structured: 1 = very accurate	37.3	22.5	13.6	9.7	12.4	-.187
F1C93C (1,2,3,4 = 0; 5 = 1)						
TNSG (or TCHRNSG)						
Percent poor & fair Teachers	16.0	17.8	20.9	23.5	27.1	.222
(F1C92A & F1C92B)						

*All correlations were significant at .01 level.